

American Academy of Allergy Asthma & Immunology

February 27, 2010

Workshop 2813

**Bench to Bedside Approach
to Contact Dermatitis**

Diagnosis and Therapy of Contact Dermatitis

Luz Fonacier, MD

Section Head of Allergy

Training Program Director in Allergy & Immunology

Winthrop University Hospital

Professor of Clinical Medicine

SUNY at Stony Brook

Atopy Patch Test to Food for Eosinophilic Esophagitis

- **Foods are tested by both prick and patch test**
- **Food suggesting a reaction is tested**
 - **If no foods are identified, a general screen is done**
- **Native foods are preferred: milk, egg, wheat, soy**
- **Undiluted native foods do not seem to increase irritant reactions**
- **Size of Finn chamber**
 - **6 mm cup decreased sensitivity compared with 12 mm**
- **Age do not seem to influence the outcome**

Patch Test Concentration

Allergen	Majamaa et al **	Niggemann et al ***	Spergel et al****
Milk	300 mg milk powder in 0.2 ml saline *	1 drop 3.5% milk	3 gm dry skim milk in 1 ml saline
Wheat, Barley, Rye, Oat	200 mg in 0.3 ml saline (20 mg in Finn chamber)	Wheat powder 1 gm/10 ml water	2 gm in 2 ml saline
Soy	200 mg in 0.3 ml saline	Soy bean milk	2 gm dry soy instant formula in 2 ml saline
Corn, Rice, Potatoes	Kennels dampened with saline		2 gm Corn meal, dehydrated potatoes or rice flour in 2 ml saline
Egg	40 mg lyophilized egg white in 0.2 ml saline	1 drop native egg white & yolk	2 gm dried egg white in 2 ml saline
Buckwheat	200 mg in 0.3 ml saline (20 mg in Finn chamber)		
Fruit, vegetables, meat			Commercial single ingredient baby food undiluted

* Isolauari et al. J Allergy Clin Immunol. 1996; 97 (1): 9-15

** Majamaa et al. Allergy. 1999; 54 (8); 851-856

*** Niggemann B et al. Allergy. 2000; 55:281-285

**** Spergel et al. J Allergy Clin Immunol. 2002;109(2):363-368

Spergel et al. Annals Allergy, Asthma & Immunol. 2005;95:336-343

Atopy Patch Test to Food for Eosinophilic Esophagitis

- | | |
|-------------------------------------|-------------------------------------|
| 1. Barley (1gm/1ml) | 14. Green Beans (Baby Food) |
| 2. Corn (1gm/1ml) | 15. Peas (Baby Food) |
| 3. Oat (1gm/1ml) | 16. Peach (Baby Food) |
| 4. Rice (1gm/1ml) | 17. Pear (Baby Food) |
| 5. Rye (1gm/1ml) | 18. Potato (Potato Buds) |
| 6. Wheat (1gm/1ml) | 19. Sweet Potato (Baby Food) |
| 7. Milk Dried (3gm/1ml) | 20. Squash (Baby Food) |
| 8. Egg White Dried (1gm/1ml) | 21. Beef (Baby Food) |
| 9. Soy (1gm/1ml) | 22. Chicken (Baby Food) |
| 10. Peanut | 23. Ham (Baby Food) |
| 11. Apple (Baby Food) | 24. Lamb (Baby Food) |
| 12. Banana (Baby Food) | 25. Turkey (Baby Food) |
| 13. Carrot (Baby Food) | 26. Saline |

Jarred Baby Food must be single ingredient, Level 1

Oral corticosteroids or other immunosuppressants must be discontinued 1 month before testing

Topical corticosteroids and topical immunosuppressants (Elidel, Protopic) must not be used at the site of patch test 1 week before testing

Atopy Patch Test to Food for Eosinophilic Esophagitis

Patch Test Read

- | | |
|----------|--|
| 0 | No reaction |
| 1 | Single or Scattered Red Papules with minimal induration |
| 2 | Solid red with moderate induration |
| 3 | Solid red with significant induration |

- **Positive Test**
 - **1 or greater**
 - **4 or more papules**
- **Positive saline need a repeat test in 1 month**

Atopy Patch Testing to Food

- **Food challenges are positive from 40-60 %**
- **Sensitivity of the APT seem to be higher in**
 - **Delayed cutaneous reactions**
 - **Cereals such as wheat & rye**
- **Specificity of APT is fairly high for both early & late phase reactions, false positive results are uncommon**
- **Positive predictive value of APT is high for cow's milk, egg & wheat**
 - **Many patients with (-) prick test have (+) APT to milk, egg & wheat**
- **Parallel Prick & APT heightened sensitivity with only marginal decrease in specificity compared to either test alone**
- **APT is not standardized & elimination-challenge test is essential in the diagnosis of food allergy**

Thank You